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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,589	12/28/2004	Erich Becker	SMB-PT123 (PC03 200 B US)	9648
3624 7590 05/13/2008 VOLPE AND KOENIG, P.C. UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103			EXAMINER FRANTZ, JESSICA L	
			ART UNIT 3746	PAPER NUMBER
			MAIL DATE 05/13/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/519,589

Applicant(s)

BECKER ET AL.

Examiner

JESSICA L. FRANTZ

Art Unit

3746

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 September 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Drawings

1. The drawings were received on 9/14/2007. These drawings are accepted.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Broyan 4,196,746 in view of Edwards et al. 5,025,829. Broyan teaches the invention as claimed including a pump (compressor) comprising as least one shield valve 10 which has a valve disk 10 of flexible material (column 3, lines 60-64), which is clamped (meaning unable to move radially) in a central region as shown in figures 4-5 by bolt 11 and is movable between an open and closed position, in said closed position the valve disk closes at least one valve opening as shown in figure 4 wherein extensions (tabs as shown in figure 5) project from the valve disk in step form for limiting a valve opening motion, gaps (not labeled, see figure 5) being located between the extensions and the valve disk that define through flow openings of the valve. The plurality of extensions project generally uniformly from a peripheral edge of the disk as shown in figure 5 and wherein the central region of the valve disk is centered by a pin 11 which passes through a central perforation as shown in figure 4 and the extensions extend at least sectionally transversely to the disk radius in a spiral form.

4. Broyan fails to teach a sealing ring connected to the valve disk via the extensions. Edwards teaches a sealing ring 14 connected to the valve disk 18 via extensions 20 and gaps 16 between the valve disk and sealing ring. Edwards further teaches the valve disk is clamped between two housing portions 22, 24. Edwards teaches this valve disk structure for sealing the housing together and creating a simple construction which allows various amounts of preloading (Edwards, column 2, lines 20-44). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used the sealing ring of Edwards with the structure of Broyan for the purpose of sealing the housing together and creating a simple construction which allows various amounts of preloading (Edwards, column 2, lines 20- 44).

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Broyan 4,196,746 in view of Edwards et al. 5,025,829 and further in view of Becker et al. 5,275,541. The modified invention of Broyan in view of Edwards teaches the invention substantially as claimed but fails to teach the following claimed limitation as taught by Becker: the valve abutment surface 28 has an approximately conical shape as shown in figures 2-5 for the purpose of receiving the portion of the valve element 24 which extends outwardly beyond the surface 40 when the valve 22 is open and enables the median portion of the diaphragm 3 to draw fluid from a suitable source into the chamber 13 (see Becker column 6, lines 49-57). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have made the valve abutment surface of Broyan in view of Edwards in the form of Becker's valve abutment surface for the purpose of receiving the portion of the valve element 24 which extends outwardly

beyond the surface 40 when the valve 22 is open and enables the median portion of the diaphragm 3 to draw fluid from a suitable source into the chamber 13 (see Becker column 6, lines 49-57).

Response to Arguments

6. Applicant's arguments filed 9/14/2007 have been fully considered but they are not persuasive. Specifically, Applicant argues that Broyan fails to provide a disk clamped in its central region since the entire disk is moved up and down against a spring bias. In that regard, Examiner has read the term clamped to include those methods of fixing items which restrains movement in some fashion. Here, the disk may not move radially and in that light is "clamped." Secondly, it is noted that Applicant appears to be interpreting Examiner's rejection in view of the Embodiment of Broyan featured in figures 1-3 which does, as indicated by Applicant, include biasing springs where the entire plate is moved up and down. However, Examiner has indicated that the rejection of the instant application is in view of the second Embodiment of Broyan found in figures 4 and five. A close examination of figures 4 and 5 of Broyan will also reveal that contrary to Applicants assertion that Broyan teaches away from the inclusion of the sealing ring, or being clamped at the outer portions of the extensions, Broyan has indicated clamping the edges of the tabs between seat 8 and guard 9 and just allowing the central portion to flex up or down. For clearer description, please refer to Column 3, line 38- Column 4, line 21. Applicant is also kindly directed to see figure 5 of Broyan where the gaps are clearly indicated between the central disk portion and the extensions of the valve.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **JESSICA L. FRANTZ** whose telephone number is (571)272-5822. The examiner can normally be reached on Monday through Friday 8:30a.m.-5:00p.m. E.S.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art
Unit 3683

/Jessica L Frantz/
Examiner, Art Unit 3746